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EXAMINER	
ADDY, ANTHONY S	
ART UNIT	**PAPER NUMBER**
2617	

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/065,257	NARASIMHA ET AL.	
	Examiner	Art Unit	
	Anthony S. Addy	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03/24/2006, 05/04/2006 and 05/09/2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6-17,19-32 and 34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-17,19-32 and 34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *05/15/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 24, 2006, May 04, 2006 and May 09, 2006 has been entered. **Claims** 1-4, 6-17, 19-32 and 34 are pending in the present application.

Information Disclosure Statement

3. The references listed in the Information Disclosure Statement filed on May 15, 2006 have been considered by the examiner (see attached PTO-1449 form or PTO/SB/08A and 08B forms).

Response to Arguments

4. Applicant's arguments with respect to **claims** 1-4, 6-17, 19-32 and 34 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1-4, 8, 10-11, 13-14, 16-17, 21-27 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Brederveld et al., EP 0 605 989 A1 (hereinafter Brederveld)** and further in view of **Ostberg et al., U.S. Publication Number 2004/0203839 A1 (hereinafter Ostberg).**

Regarding claims 1, 16 and 30, Brederveld teaches a computer-readable medium having computer-executable instructions for performing a method of selecting a communication system (see abstract and Figs. 5A & 5B), comprising: receiving a first quality indicator for a single channel from a current communication system (see col. 2, lines 30-35, col. 4, line 48 through col. 5, line 10 and Figs. 1 & 5A; block 104 [i.e. the beacon message received by mobile station 20 from a current base station 16-1 reads on the limitation "receiving a first quality indicator for a single channel from a current communication system"]); remaining in communication with the current system (see col. 4, lines 47-52 [i.e. mobile station 20 remains in communication with base station 16-1 during the cell handover process]); receiving a second quality indicator for the same channel after a predetermined time period in response to the first quality indicator being below a predetermined threshold value (see col. 5, lines 10-41 and Figs. 5A & 5B; blocks 108-118); scanning any channels in response to the second quality indicator being below the predetermined threshold value (see col. 5, lines 36-39 and Fig. 5B; step

122 [i.e. mobile station 20 monitors beacon messages from base stations 16-1....16-N in response to the second quality indicator being below the predetermined threshold value TH2]); and acquiring another channel in response to the other channel having an associated quality indicator greater than or equal to the predetermined threshold value (see col. 5, lines 39-53 and Fig. 5B; block 123-124).

Brederveld fails to explicitly teach scanning any channels in a channel scan list and acquiring another channel from the channel scan list.

In an analogous field of endeavor, Ostberg teaches methods for performing fast initial frequency scans and cell searches, wherein a controller is configured to control a wireless receiver of a mobile terminal to identify a cellular control channel that can be received by the mobile terminal from a channel list of cellular control channels (see abstract, p. 4 [0034-0035 & 0038-0039]). According to Ostberg, scanning for channels may be performed sequentially and repeatedly, to identify a plurality of cellular control channels that can be received by the mobile terminal, and a cellular control channel to be used then may be selected from the plurality of cellular control channels that were identified using conventional techniques (see p. 4 [0039] and Fig. 4).

It would therefore have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Ostberg, to the method of Brederveld, to include a method of scanning any channels in a channel scan list and acquiring another channel from the channel scan list, in order to identify and select a cellular control channel that can be received from a history list of cellular control channels that were

previously received by a mobile terminal as per the teachings of Ostberg (see abstract, p. 2 [0017] and p. 4 [0038]).

Regarding claims 3, 4, 21 and 32, Brederveld in view of Ostberg teaches all the limitations of claims 1, 16 and 30. Brederveld fails to explicitly teach a method, wherein scanning any channels in the channel scan list comprises skipping any channels on a grey zone channel list.

Ostberg, however teaches methods for performing fast initial frequency scans and cell searches, wherein a controller is configured to control a wireless receiver of a mobile terminal to identify a cellular control channel that can be received by the mobile terminal from a channel list, and to scan for a next cellular control channel that can be received by the mobile terminal by skipping at least one cellular control channel that is adjacent the cellular control channel that was identified, based on the channel allocation rules in the cellular system (see p. 2 [0018], p. 3 [0032], p. 4 [0034 & 0039]

It would therefore have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Ostberg, to the method of Brederveld and Ostberg, to include a method, wherein scanning any channels in the channel scan list comprises skipping any channels on a grey zone channel list in order to search on the most probable frequencies and exclude "not possible" carrier frequencies when detecting a base station, thus significantly reducing the initial cell search time as taught by Ostberg (see paragraph 0031, lines 19-22).

Regarding claim 8, Brederveld in view of Ostberg teaches all the limitations of claim 1. Brederveld further teaches a method, further comprising performing an initial

acquisition scan in response to failing to acquire the other channel having the associated quality indicator greater than or equal to the predetermined threshold value (see col. 5, lines 10-18 and Fig. 5A; blocks 112 & 114).

Regarding claim 10, Brederveld in view of Ostberg teaches all the limitations of claim 1. Ostberg further teaches a method, wherein acquiring the other channel comprises acquiring one of a CDMA channel or an Advanced Mobile Phone Service (AMPS) channel (see p. 1 [0006 & 0008]).

Regarding claim 11, Brederveld in view of Ostberg teaches all the limitations of claim 1. Ostberg further teaches a method, further comprising building the channel scan list, wherein the channel scan list includes channels on alternate systems (see p. 4 [0035 & 0038]).

Regarding claim 13, Brederveld in view of Ostberg teaches all the limitations of claim 1. Ostberg further teaches a method, wherein scanning any channels in the channel scan list comprises performing a microscan of any channels on a grey zone channel list (see p. 2 [0019-0020], p. 3 [0032-0033] and p. 4 [0034 & 0043]).

Regarding claim 14, Brederveld in view of Ostberg teaches all the limitations of claim 13. Ostberg further teaches a method, wherein performing a microscan comprises: receiving a received signal strength indication (RSSI) for a channel in the grey zone channel list; and comparing the RSSI to one of a threshold value or a previously received RSSI for the channel (see p. 3 [0030-0033] and p. 5 [0052]).

Regarding claims 17 and 22, Brederveld in view of Ostberg teaches all the limitations of claims 16. Brederveld further teaches a method, further comprising

performing an initial acquisition scan in response to failing to acquire another communication system (see col. 5, lines 10-18 and Fig. 5A; blocks 112 & 114).

Regarding claim 23, Brederveld teaches a communication device (see col. 3, lines 22-34 and Fig. 2; shows a mobile station 20), comprising: a receiver to receive a first quality indicator for a single channel and a second quality indicator for the same channel after a predetermined period of time in response to the first quality indicator being below a predetermined threshold value (see col. 2, lines 30-35, col. 3, lines 22-24, col. 4, line 48 through col. 5, line 41 and Fig. 2; shows a wireless transceiver 30); wherein the first and second quality indicators are received from a current communication system and the communication device remains in communication with the current communication system during the predetermined period of time (see col. 4, line 47 through col. 5, line 41 [i.e. mobile station 20 remains in communication with base station X (16-1) during the cell handover process]); and a microprocessor adapted to cause scanning of any channels in response to the second quality indicator of the channel being below the predetermined threshold value (see col. 3, lines 22-27, col. 5, lines 36-53 and Fig. 2; shows a processor 34 [i.e. mobile station 20 monitors beacon messages from base stations 16-1....16-N in response to the second quality indicator being below the predetermined threshold value TH2]).

Brederveld fails to explicitly teach a channel scan list; and scanning of any channels on the channel scan list.

In an analogous field of endeavor, Ostberg teaches methods for performing fast initial frequency scans and cell searches, wherein a controller is configured to control a

wireless receiver of a mobile terminal to identify a cellular control channel that can be received by the mobile terminal from a channel list of cellular control channels (see abstract, p. 4 [0034-0035 & 0038-0039]). According to Ostberg, scanning for channels may be performed sequentially and repeatedly, to identify a plurality of cellular control channels that can be received by the mobile terminal, and a cellular control channel to be used then may be selected from the plurality of cellular control channels that were identified using conventional techniques (see p. 4 [0039] and Fig. 4).

It would therefore have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Ostberg, to the method of Brederveld, to include a method of scanning any channels in a channel scan list and acquiring another channel from the channel scan list, in order to identify and select a cellular control channel that can be received from a history list of cellular control channels that were previously received by a mobile terminal as per the teachings of Ostberg (see abstract, p. 2 [0017] and p. 4 [0038]).

Regarding claim 24, Brederveld in view of Ostberg teaches all the limitations of claim 23. Brederveld further teaches a communication device, wherein the microprocessor is adapted to acquire another channel from the channel scan list in response to the other channel having an associated quality indicator greater than or equal to the predetermined threshold value (see col. 3, lines 22-27, col. 5, lines 36-53 and Fig. 2; shows a processor 34).

Regarding claim 26, Brederveld in view of Ostberg teaches all the limitations of claim 23. Ostberg further teaches a communication device, further comprising a

memory coupled to the microprocessor, wherein the memory includes a grey zone channel list (see p. 5 [0052] and Fig. 3).

Regarding claim 27, Brederveld in view of Ostberg teaches all the limitations of claim 23. Ostberg further teaches a communication device, wherein the channel scan list comprises a preferred roaming list (see p. 4 [0034-0035]).

Regarding claims 2, 25 and 31, Brederveld in view of Ostberg teaches all the limitations of claims 1, 23 and 30. Brederveld further teaches the first and second quality indicators each comprise an E_c/I_o of a code division multiple access (CDMA) pilot channel (see col. 4, line 54 through col. 5, line 40).

7. Claims 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Brederveld et al., EP 0 605 989 A1 (hereinafter Brederveld)** and **Ostberg et al., U.S. Publication Number 2004/0203839 A1 (hereinafter Ostberg)** as applied to claim 1 above, and further in view of **Shah, U.S. Patent Number 6,047,071 (hereinafter Shah)**.

Regarding claim 15, Brederveld in view of Ostberg teaches all the limitations of claim 1. The combination of Brederveld and Ostberg fails to explicitly teach a method, further comprising programming the predetermined threshold value over-the-air.

However the programming of mobile phone parameters over-the-air, such as a predetermined threshold value is very well known in the art as taught for example by Shah. Shah teaches a method for maintaining, changing, and/or updating of mobile phone parameters by a network service provider over-the-air, without requiring

intervention by the mobile phone user (see abstract, col. 1, lines 5-10 and col. 2, lines 19-67).

It would therefore have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Shah, to the method of Brederveld and Ostberg, to include a method, further comprising programming the predetermined threshold value over-the-air in order to allow a network service provider to initiate over-the-air access to a mobile station's Number Assignment Module (NAM) without requiring user intervention, and allowing for actions to be taken to protect the service provider's resources as well as to improve service to its subscribers as taught by Shah (see col. 7, lines 56-62).

8. Claims 6, 12, 19-20 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Brederveld et al., EP 0 605 989 A1 (hereinafter Brederveld)** and **Ostberg et al., U.S. Publication Number 2004/0203839 A1 (hereinafter Ostberg)** as applied to claims 1, 16, 23 and 30 above, and further in view of **Kamel et al., U.S. Patent Number 6,496,531 (hereinafter Kamel)**.

Regarding claims 6, 12, 19-20 and 34, Brederveld in view of Ostberg teaches all the limitations of claims 1, 16, 23 and 30. The combination of Brederveld and Ostberg fails to explicitly teach a method, further comprising adding the channel to a grey zone channel list in response to the second quality indicator signal being below the predetermined threshold value or removing a channel from a grey zone channel list

after the channel has been in the grey zone channel list for a predetermined period of time.

Kamel, however, teaches a method and system for controlling forward transmit power in a spread-spectrum communications system, such as a code-division multiple access (CDMA) system, wherein a mobile station measures signal parameters (e.g., E_c/I_o) of the neighbor set as the mobile station progresses through different coverage areas in a wireless system, and if a measured signal parameter of a particular pilot channel exceeds a threshold signal parameter measurement (e.g., a threshold E_c/I_o), the pilot channel is added to a candidate set (see col. 11, lines 29-51 and Fig. 4; step 30). Kamel further teaches the mobile switching center determines whether to add a new pilot channel to service the control channel or if a data channel will be opted out (see col. 11, line 55 through col. 12, line 5 and Fig. 4; step 32).

It would therefore have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of adding or removing pilot channels in a channel list of Kamel, to the method of Brederveld and Ostberg, in order for a mobile station to determine the best (e.g., strongest signal strength) forward pilot channels or the best (e.g., strongest signal strength) forward pilot channels for a particular geographic location as the mobile station progresses through different coverage areas and to prevent dropped calls during a soft handoff as taught by Kamel (see col. 6, line 54 through col. 7, line 15).

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Brederveld et al., EP 0 605 989 A1 (hereinafter Brederveld)** and **Ostberg et al., U.S. Publication Number 2004/0203839 A1 (hereinafter Ostberg)** as applied to claim 1 above, and further in view of **Labun et al., U.S. Patent Number 6,842,621 (hereinafter Labun)**.

Regarding claim 7, Brederveld in view of Ostberg teaches all the limitations of claim 1. Brederveld teaches a method, further comprising: receiving a first quality indicator for a channel (see col. 2, lines 30-35, col. 4, line 48 through col. 5, line 10 and Figs. 1 & 5A; block 104 [i.e. the beacon message received by mobile station 20 from a current base station 16-1 reads on the limitation "receiving a first quality indicator for a channel"]); receiving a second quality indicator for the channel after a predetermined time period in response to the first quality indicator being below a predetermined threshold value (see col. 5, lines 10-41 and Figs. 5A & 5B; blocks 108-118); scanning any channels in response to the second quality indicator being below the predetermined threshold value (see col. 5, lines 36-39 and Fig. 5B; step 122 [i.e. mobile station 20 monitors beacon messages from base stations 16-1....16-N in response to the second quality indicator being below the predetermined threshold value TH2]).

Brederveld fails to explicitly teach scanning channels in a channel scan list.

In an analogous field of endeavor, Ostberg teaches methods for performing fast initial frequency scans and cell searches, wherein a controller is configured to control a wireless receiver of a mobile terminal to identify a cellular control channel that can be received by the mobile terminal from a channel list of cellular control channels (see

abstract, p. 4 [0034-0035 & 0038-0039]). According to Ostberg, scanning for channels may be performed sequentially and repeatedly, to identify a plurality of cellular control channels that can be received by the mobile terminal, and a cellular control channel to be used then may be selected from the plurality of cellular control channels that were identified using conventional techniques (see p. 4 [0039] and Fig. 4).

It would therefore have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Ostberg, to the method of Brederveld, to include a method of scanning channels in a channel scan list, in order to identify and select a cellular control channel that can be received from a history list of cellular control channels that were previously received by a mobile terminal as per the teachings of Ostberg (see abstract, p. 2 [0017] and p. 4 [0038]).

The combination of Brederveld and Ostberg fails to explicitly teach a method, further comprising: starting a hysteresis timer in response to a quality indicator being below the predetermined threshold value; and receiving another quality indicator after the hysteresis timer expires.

Labun, however, teaches a timing diagram of message flows between a mobile station and a radio network control during handover, wherein radio network control sets a timer when the RSSI of the mobile station drops below the access point threshold value (see col. 9, lines 15-25). According to Labun, the timer serves as a hysteresis timer to prevent a ping-pong handover effect that could occur if the mobile station moves into an edge of a proximity or coverage area of an access point (see col. 9, lines 25-28 and Fig. 5; steps 510 & 512). Labun further teaches the radio network control

sends a disconnect command to the first access point if the hysteresis timer times out and monitors the RSSI from the mobile station at a second access point (see col. 9, lines 28-45 and Fig. 5; steps 510, 512 and 534 [i.e. the mobile station receives another quality indicator (RSSI) from access point (AP2) when the hysteresis timer time out]).

It would therefore have been obvious to one of ordinary skill in the art at the time of the invention to modify Brederveld and Ostberg with Labun, to include a method further comprising: starting a hysteresis timer in response to a quality indicator being below the predetermined threshold value and receiving another quality indicator after the hysteresis timer expires, in order to prevent a ping-pong handover effect that could occur if the mobile station moves into an edge of a proximity or coverage area of an access point as taught by Labun (see col. 9, lines 25-28).

10. Claims 9 and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Brederveld et al., EP 0 605 989 A1 (hereinafter Brederveld)** and **Ostberg et al., U.S. Publication Number 2004/0203839 A1 (hereinafter Ostberg)** as applied to claims 1 and 23 above, and further in view of **Douthitt et al., U.S. Patent Number 5,524,280 (hereinafter Douthitt)**.

Regarding claims 9 and 28-29, Brederveld in view of Ostberg teaches all the limitations of claims 1 and 23. The combination of Brederveld and Ostberg teaches a communication device and method, further comprising: scanning any channels in the channel scan list in response to the second quality indicator of the channel being below

the predetermined threshold for the predetermined period of time (see *Brederveld,* col. 5, lines 36-39, Fig. 5B; step 122 and *Ostberg*, p. 4 [0034-0035 & 0038-0039]).

The combination of Brederveld and Ostberg fails to explicitly teach starting an initial scan timer before scanning any channels in the channel scan list; and performing an initial acquisition scan in response to the initial scan timer expiring.

However the use of an initial scan timer for scanning a channel list to acquire a channel is very well known in the art as taught for example by Douthitt. Douthitt teaches a method of acquiring at a subscriber unit, a channel on which to provide data service in a general frequency reuse system, wherein an intermediate scan timer is started before scanning any channels in the channel scan list; and performing an initial acquisition scan in response to the initial scan timer expiring (see col. 7, line 61 through col. 8, line 34).

It would therefore have been obvious to one of ordinary skill in the art at the time of the invention to modify Brederveld and Ostberg with Douthitt, to include an initial scan timer for the acquisition of a channel when a mobile station progresses through different coverage areas in a communication system to minimize channel acquisition latency as taught by Douthitt (see col. 10, lines 50-65).

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony S. Addy whose telephone number is 571-272-7795. The examiner can normally be reached on Mon-Thur 8:00am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc M. Nguyen can be reached on 571-272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anthony S. Addy
May 15, 2006

ELISEO RAMOS-FELICIANO
PRIMARY EXAMINER